

Fig. 1:  $\beta$ -tubulin genes in *Physcomitrella patens*

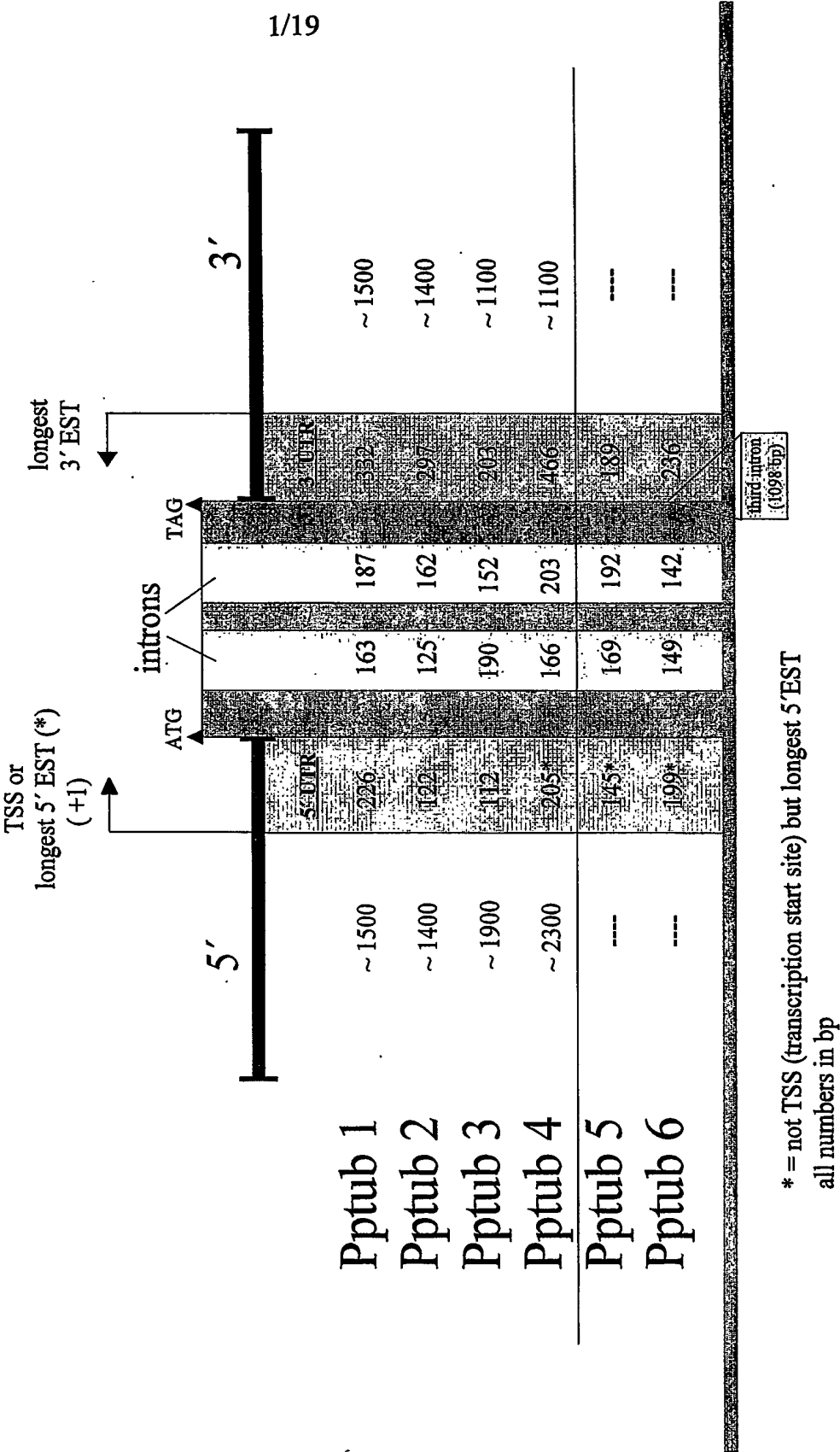


Fig. 2: Analysis of expression promoting regions of  $\beta$ -tubulins in *Physcomitrella* patens

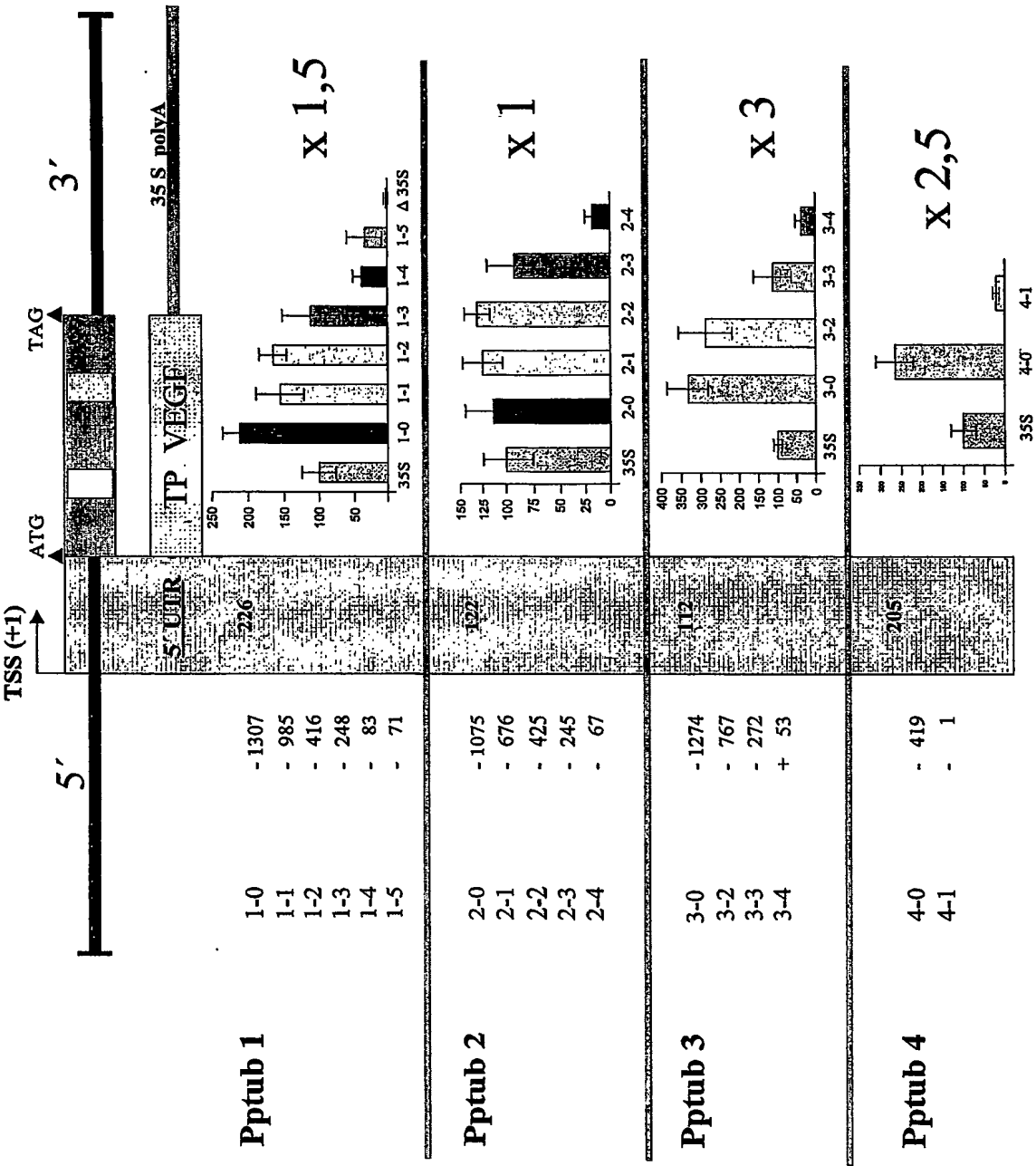


Fig. 3: Analysis of expression promoting regions of Pptub 1 by transient transformation of rhVEGF constructs

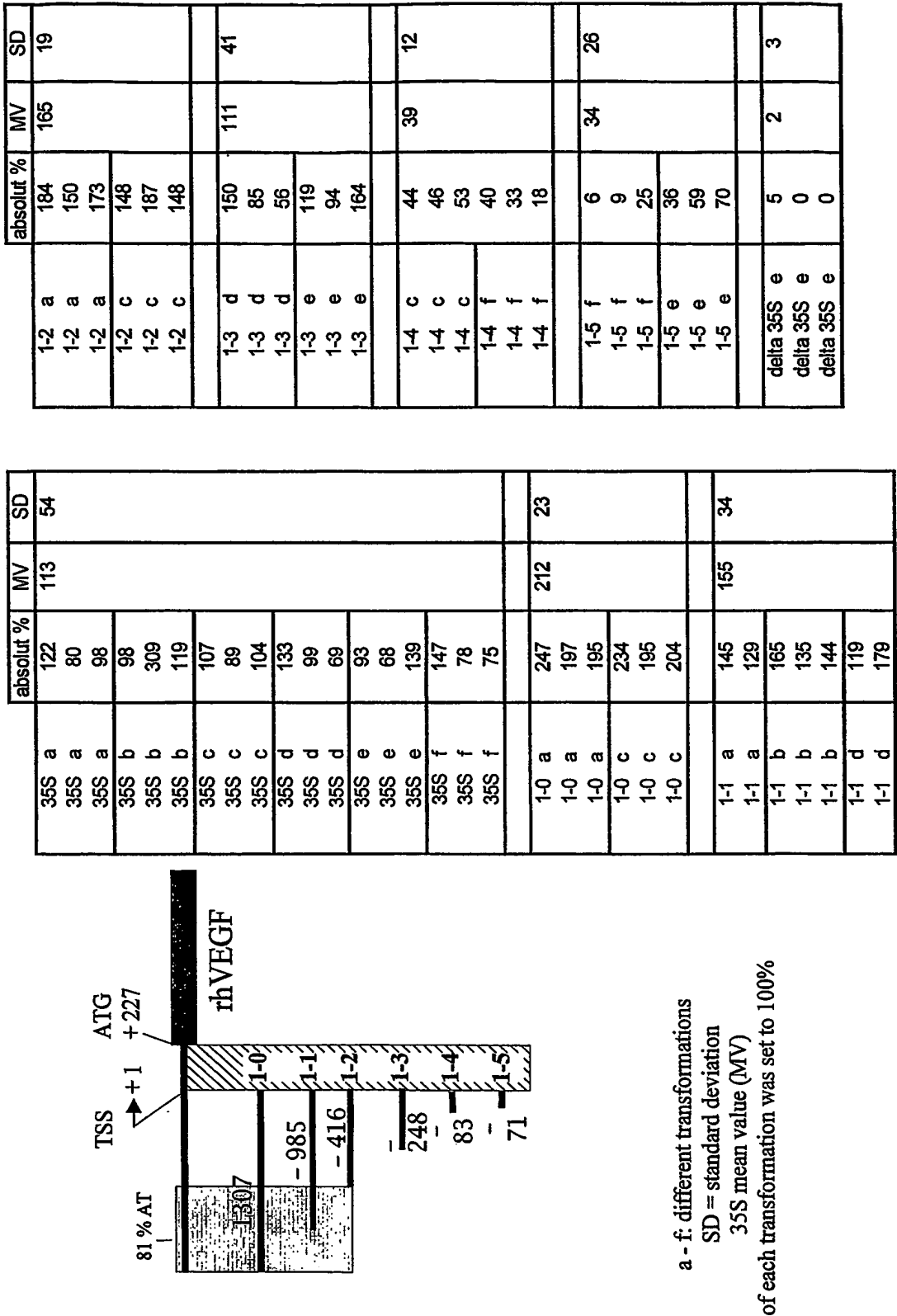
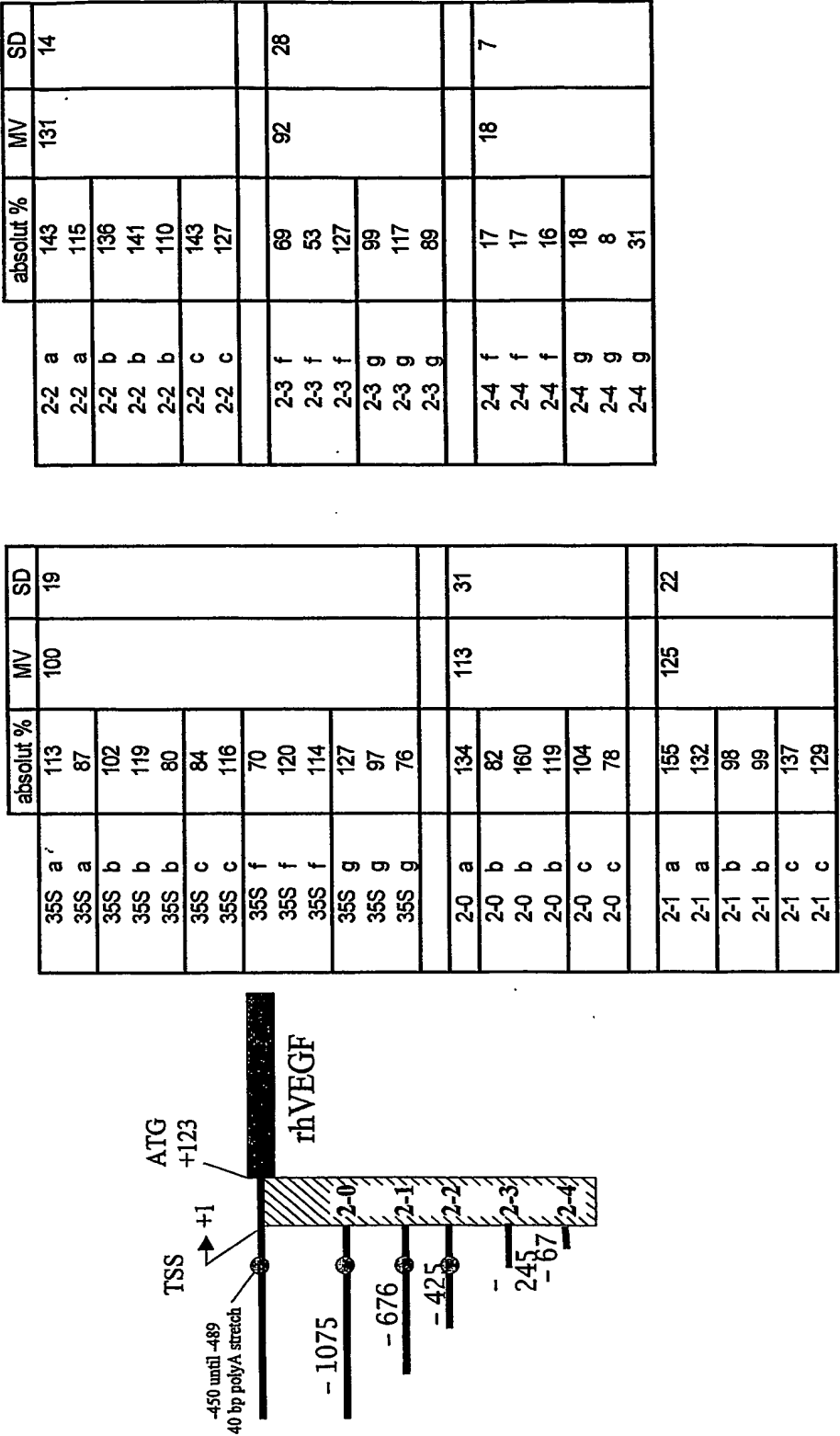
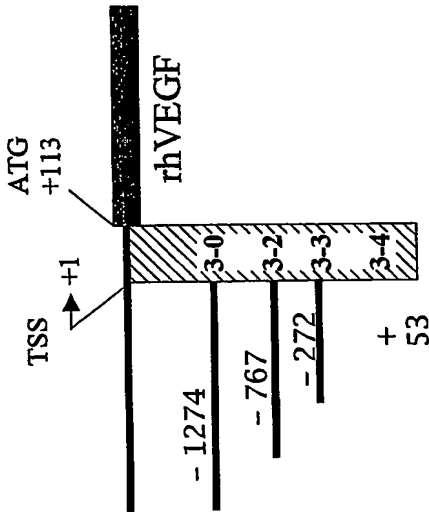


Fig. 4: Analysis of expression promoting regions of Pptub 2 by transient transformation of rhVEGF constructs



a - b, f and g: different transformations  
SD = standard deviation  
35S mean value (MV) of each transformation was set to 100%

Fig. 5: Analysis of expression promoting regions of Pptub 3 by transient transformation of rhVEGF constructs

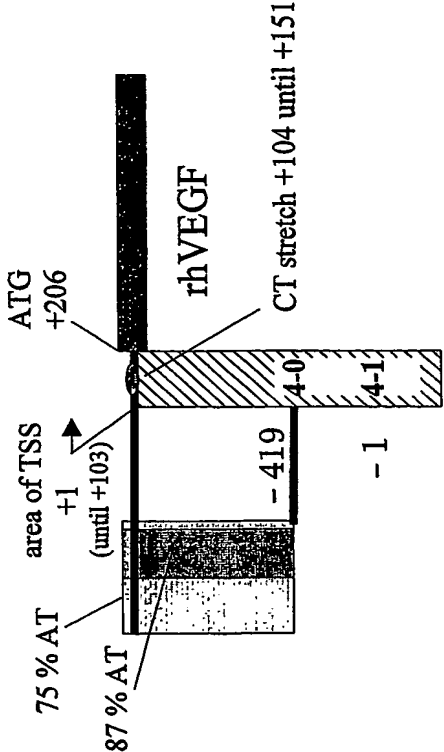


a - b, d and e: different transfections  
SD = standard deviation  
35S mean value (MV) of each transformation was set to 100%

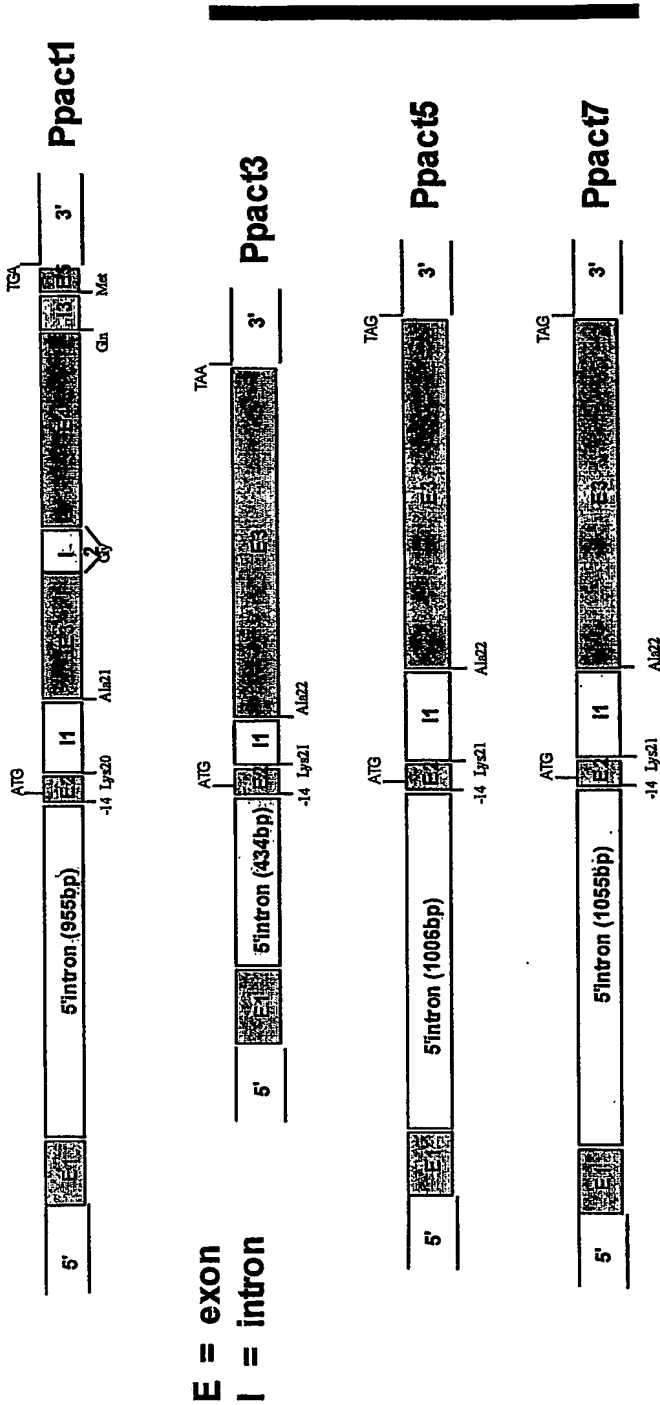
	absolut %	MV	SD
35S a	100	100	11
35S a	95		
35S a	105		
35S b	118		
35S b	81		
35S b	101		
35S d	94		
35S d	112		
35S d	94		
35S e	93		
35S e	89		
35S e	118		
3-0 e	293	332	52
3-0 e	251		
3-0 e	353		
3-0 b	387		
3-0 b	330		
3-0 b	379		
3-2 a	231	287	69
3-2 a	239		
3-2 a	247		
3-2 b	399		
3-2 b	348		
3-2 b	259		
3-3 b	138	112	49
3-3 b	104		
3-3 b	191		
3-3 d	44		
3-3 d	96		
3-3 d	101		
3-4 a	27	37	15
3-4 a	16		
3-4 a	46		
3-4 b	55		
3-4 b	50		
3-4 b	28		

Fig. 6: Analysis of expression promoting regions of Pptub 4 by transient transformation of rhVEGF constructs

	absolut %	MV	SD
35S a	63	100	30
35S a	95		
35S a	141		
35S c	70		
35S c	121		
35S c	109		
4-0 a	290	265	45
4-0 a	322		
4-0 a	229		
4-0 c	210		
4-0 c	273		
4-1 a	25	20	8
4-1 a	22		
4-1 a	5		
4-1 c	19		
4-1 c	30		
4-1 c	18		



a and c: different transformations  
SD = standard deviation  
35S mean value (MV) of each transformation was set to 100%



5'sequences resulting from iPCR:

- Ppact1: 2973 bp until ATG: 1824 bp promoter / 955 bp 5' intron
- Ppact3: 3091 bp until ATG: 2270 bp promoter / 434 bp 5' intron
- Ppact5: 3095 bp until ATG: 1909 bp promoter / 1006 bp 5' intron
- Ppact7: 3069 bp until ATG: 1805 bp promoter / 1055 bp 5' intron

Fig. 7: Genomic structure of *Physcomitrella patens* actin genes.

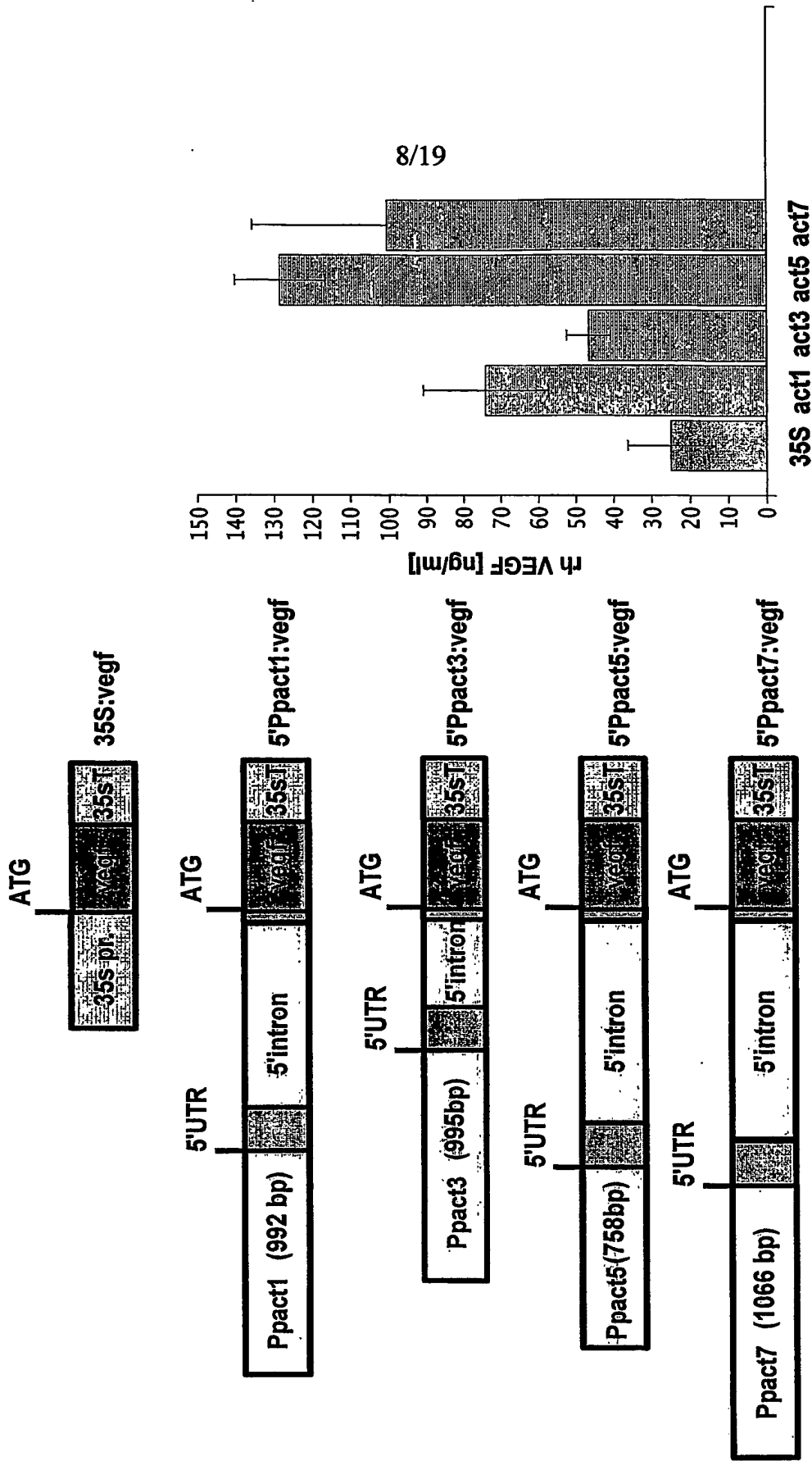


Fig. 8: Comparison of the expression activity of the different 5'actin regions.



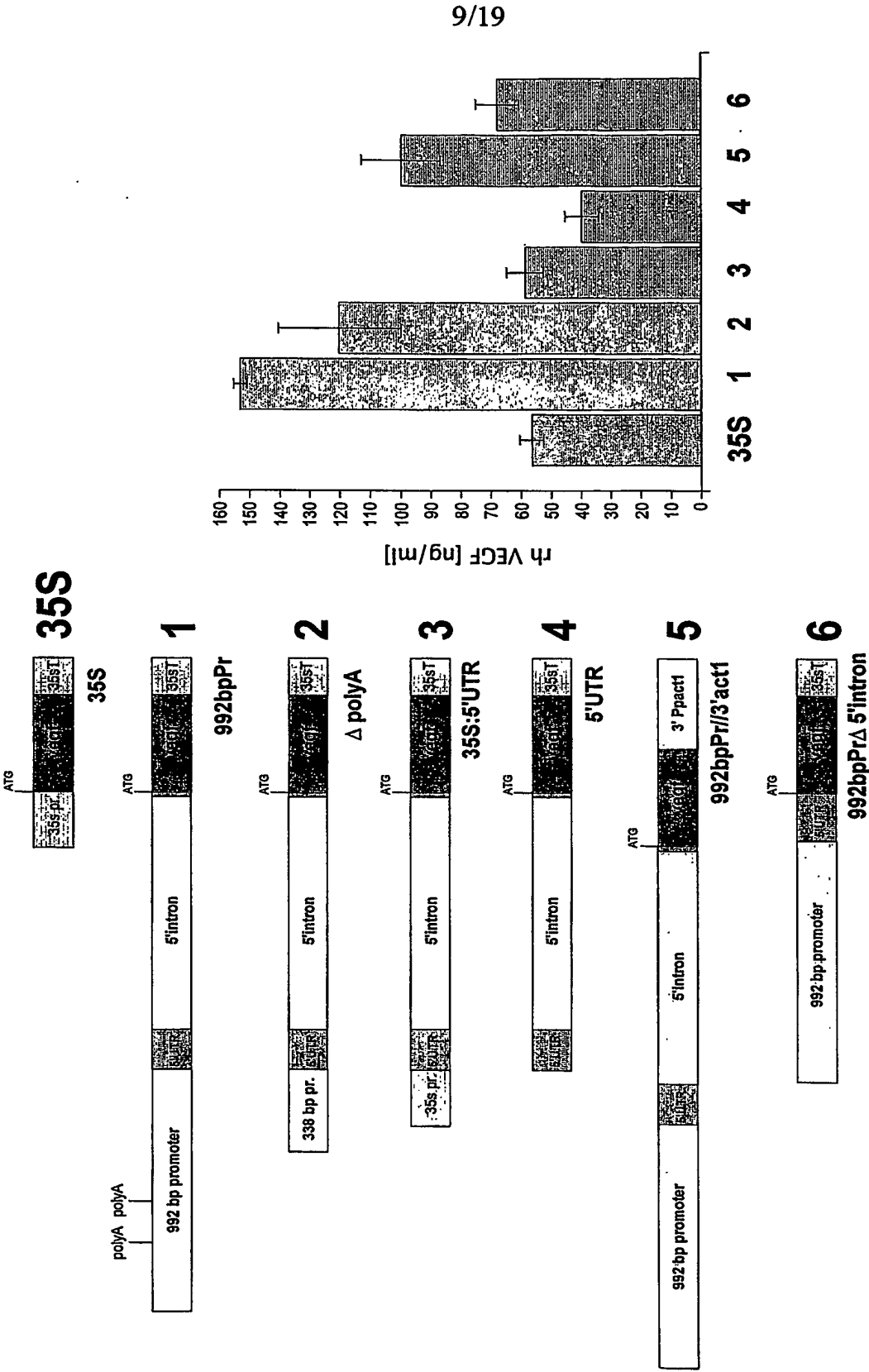
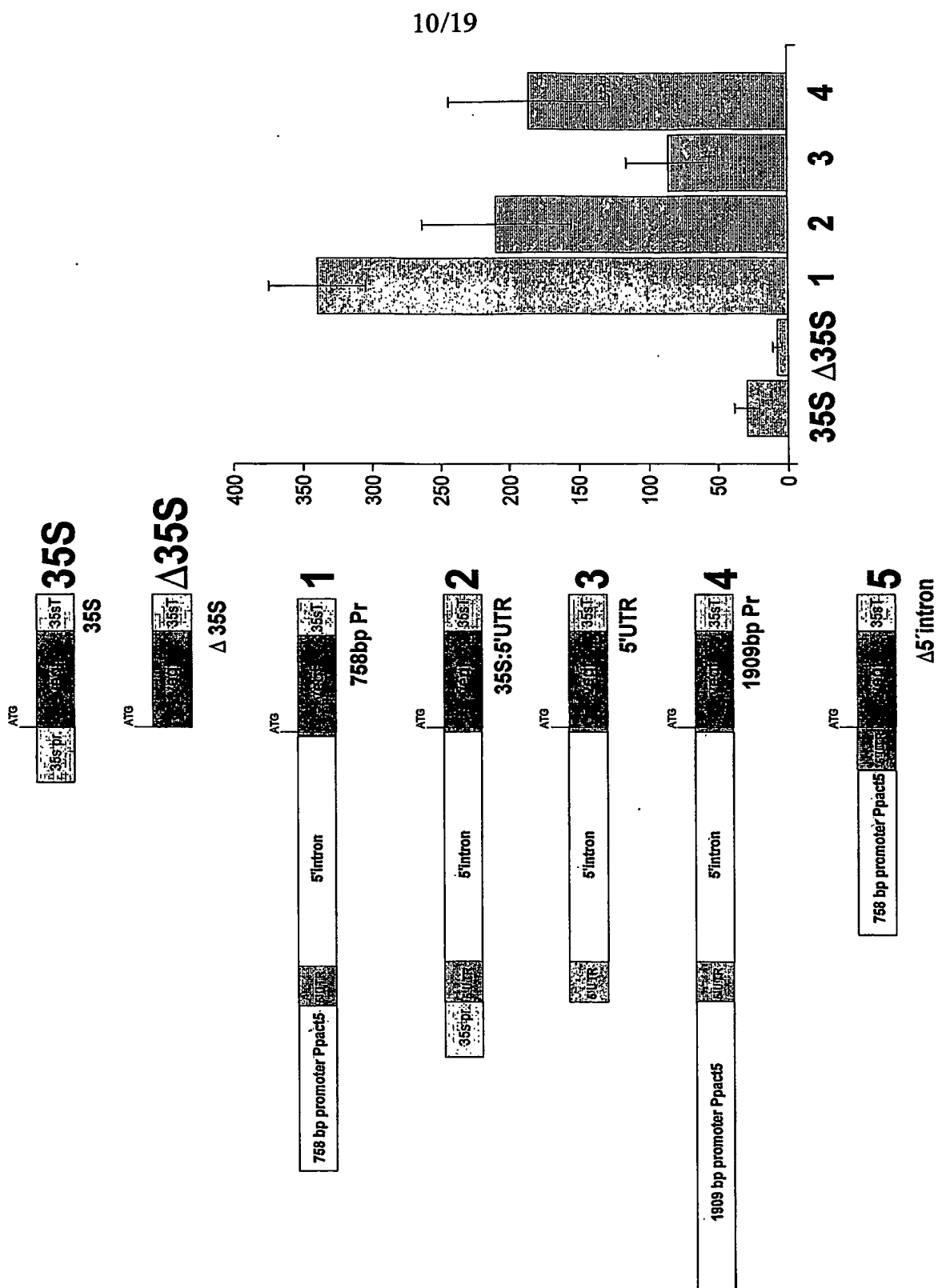


Fig. 9: Ppact1 constructs.



**Fig. 10: Ppact 5 constructs.**

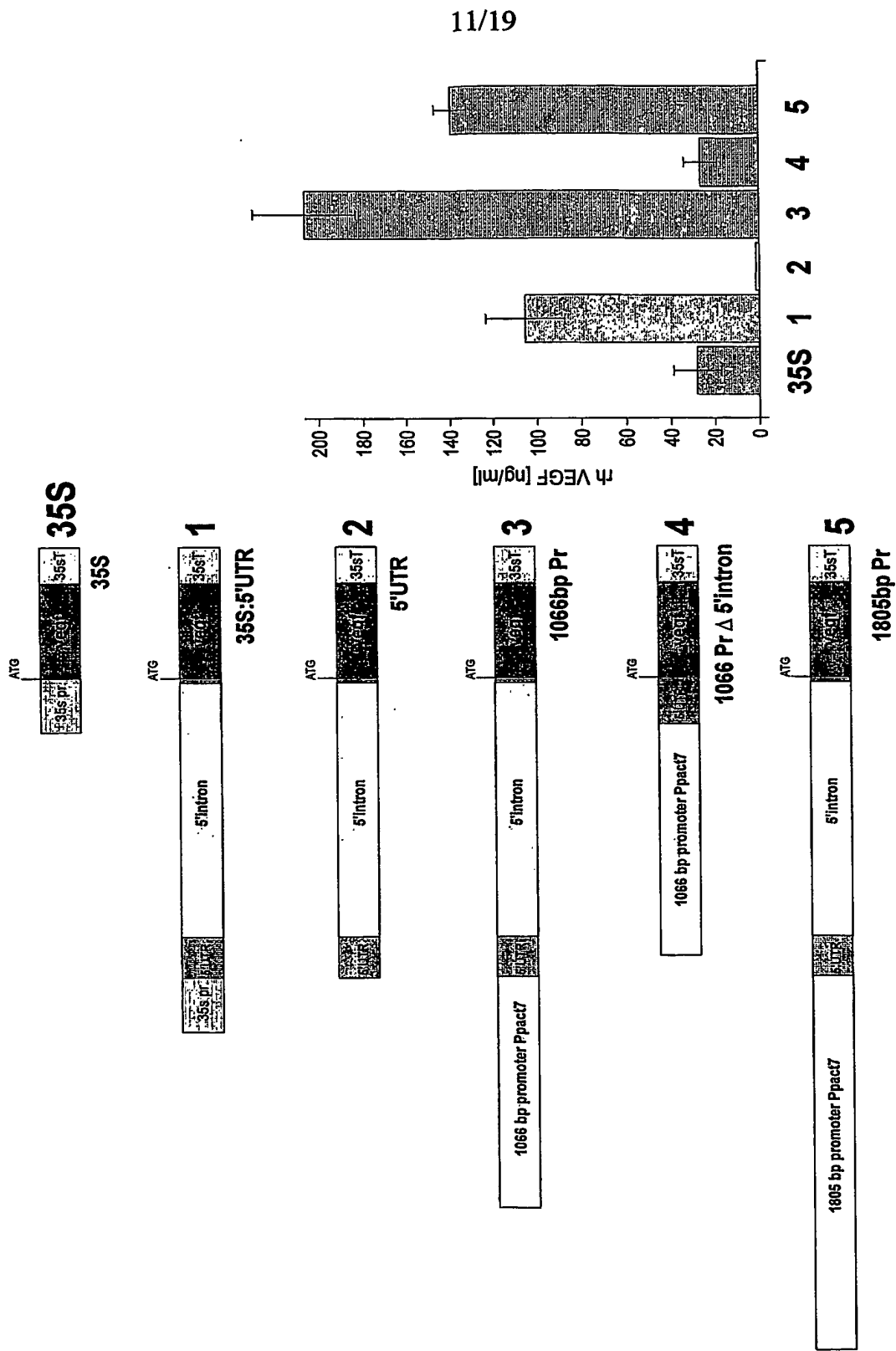
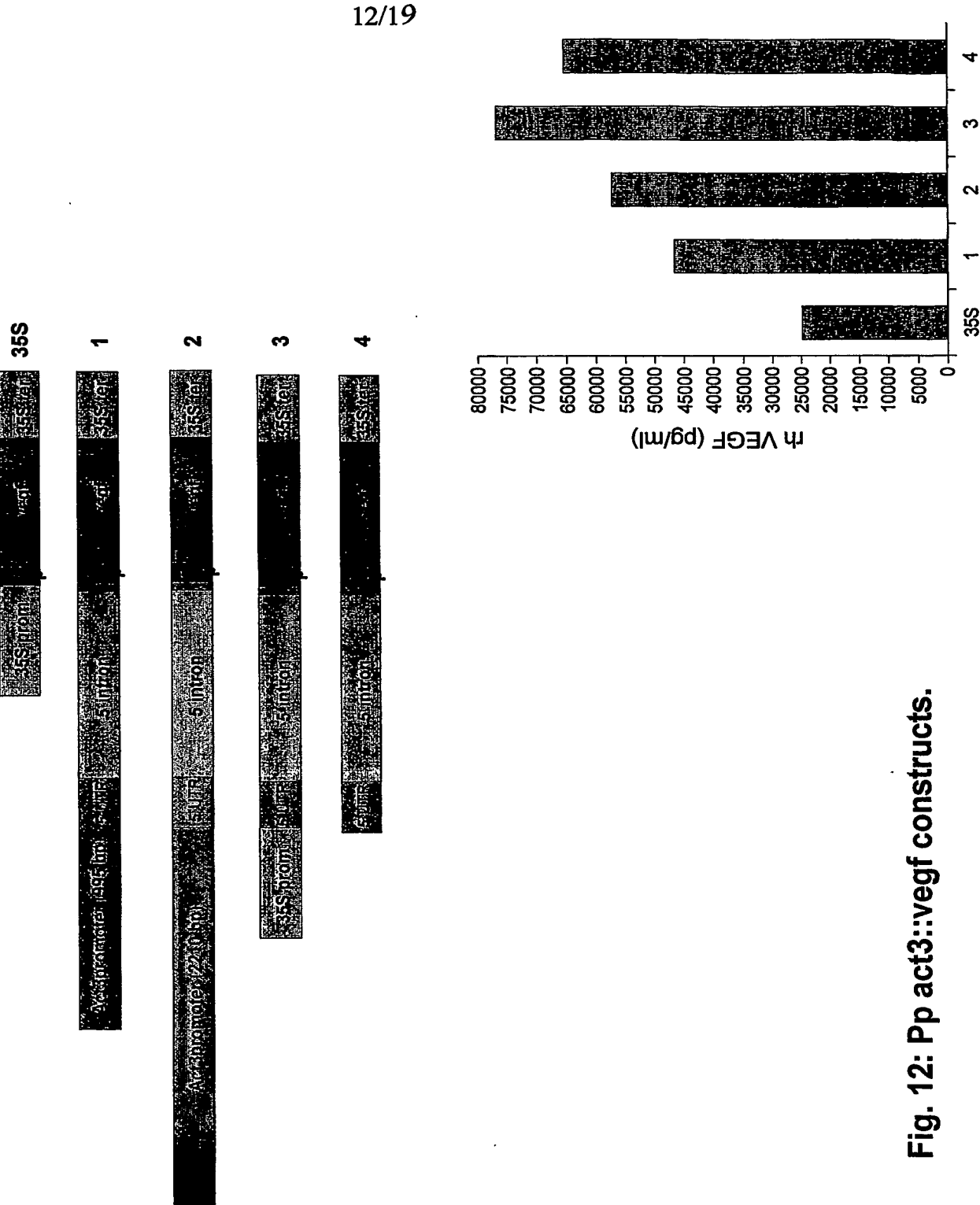


Fig. 11: Ppact 7 constructs.



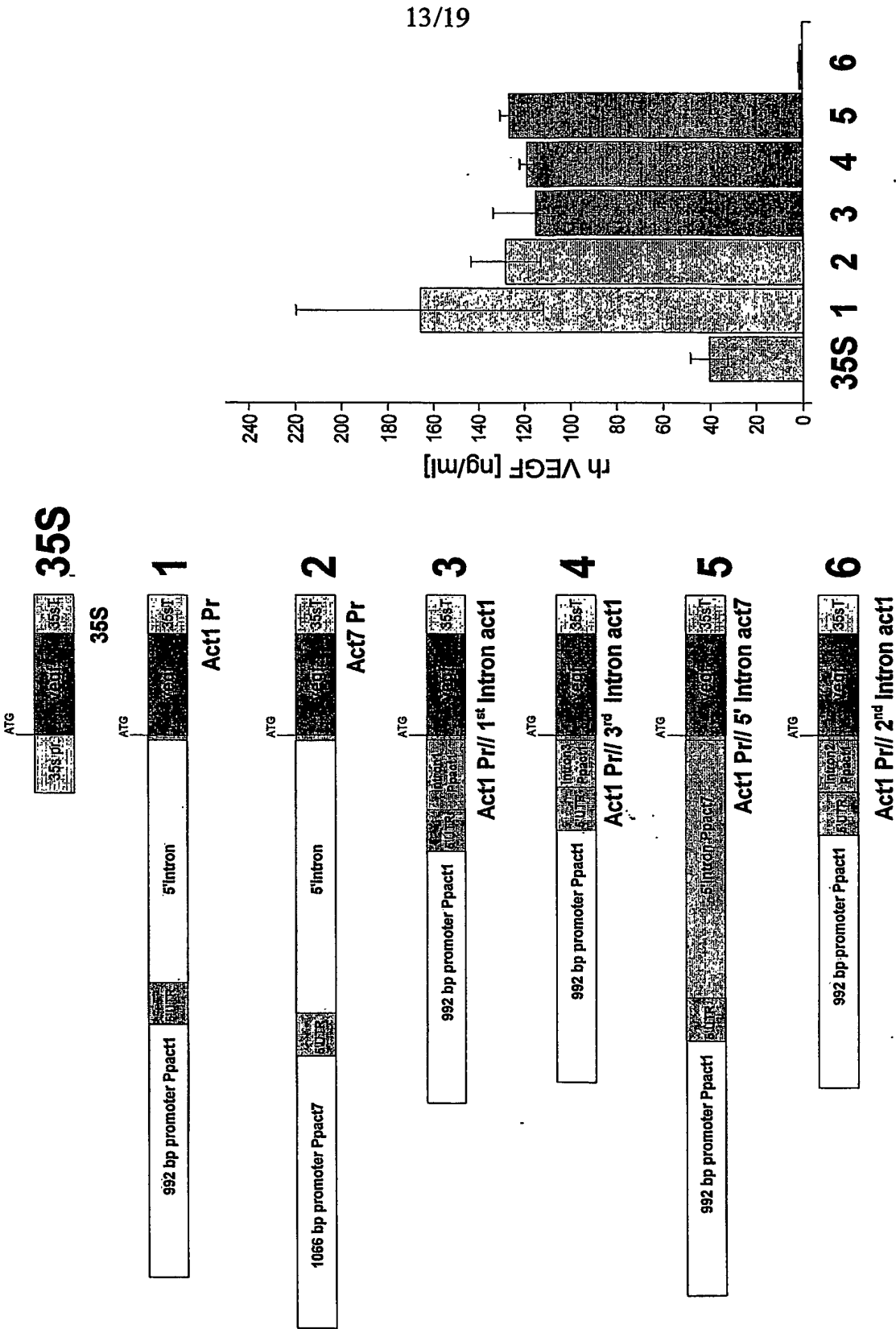
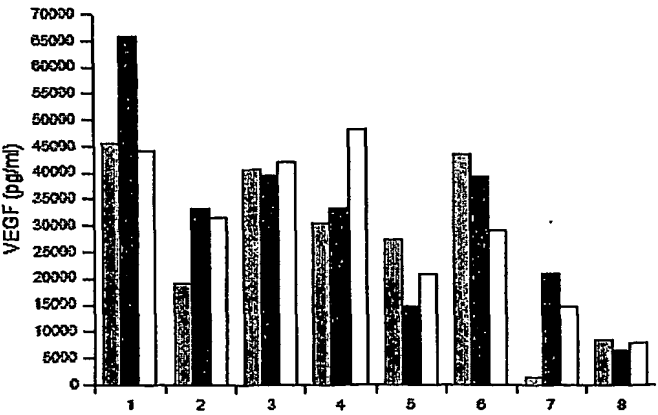
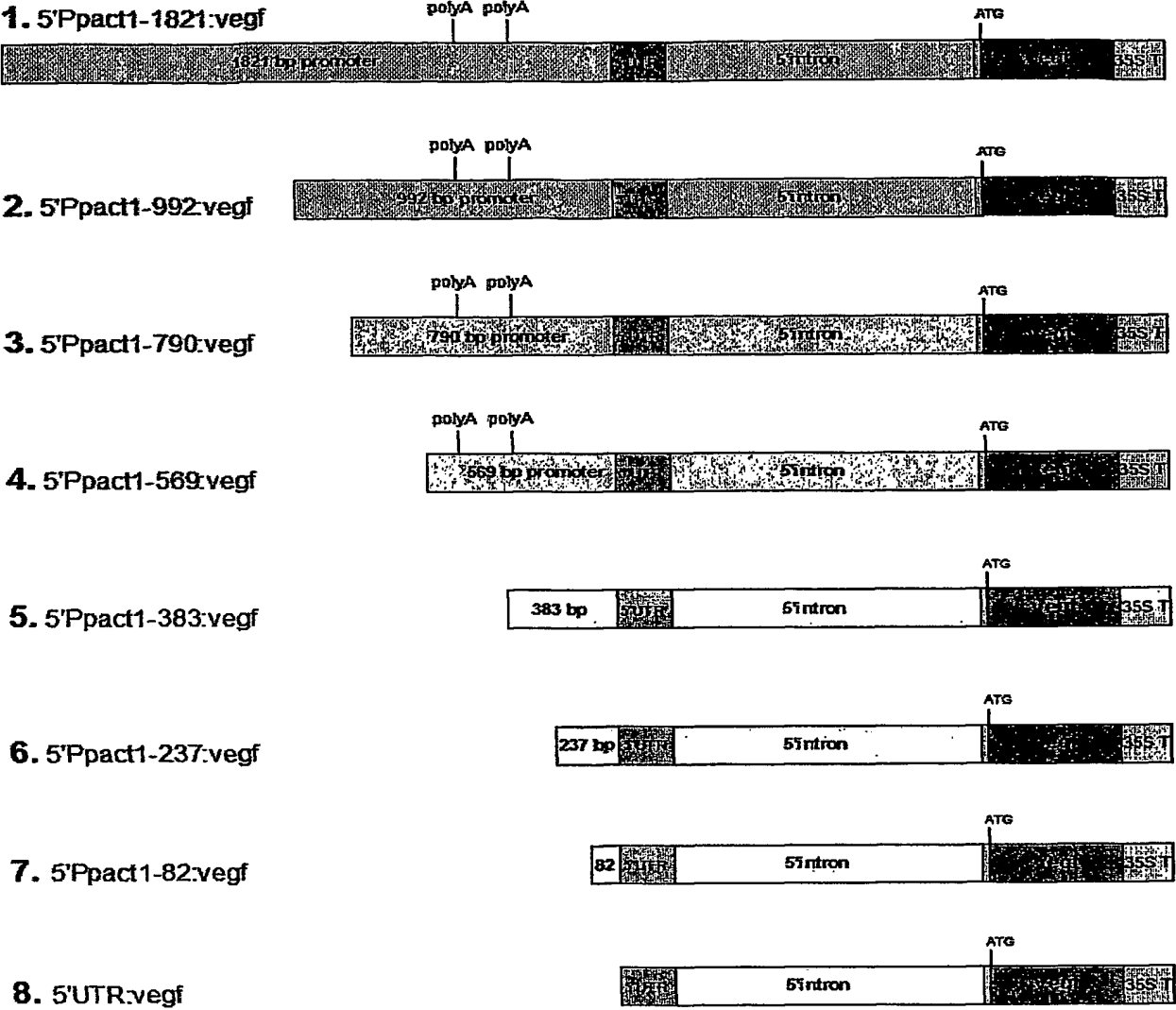


Fig. 13: Ppact1 promoter:5' intron substitutions.

**Fig. 14: Ppact1 promoter:vegf deletion constructs.**



**Fig. 15: Ppact3 promoter:vegf deletion constructs.**

**1. 5'Ppact3-2208:vegf**



**2. 5'Ppact3-992:vegf**



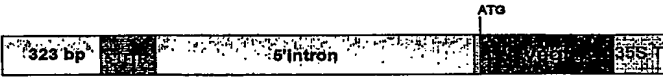
**3. 5'Ppact3-821:vegf**



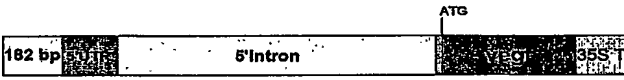
**4. 5'Ppact3-523:vegf**



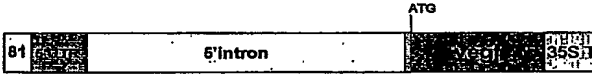
**5. 5'Ppact3-323:vegf**



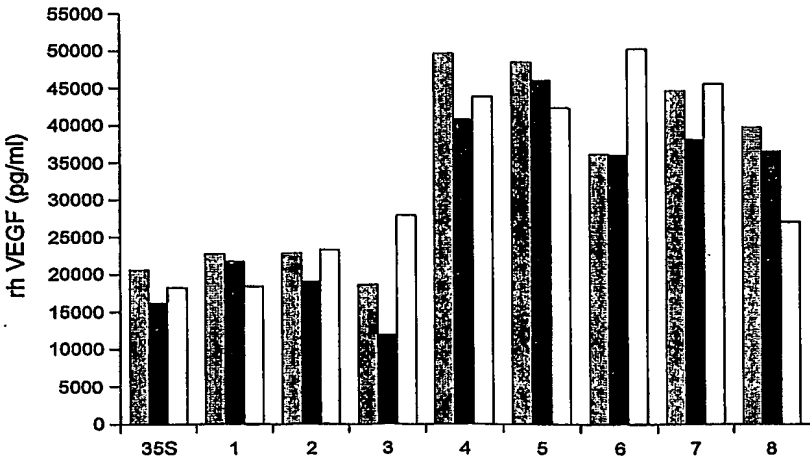
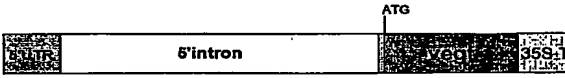
**6. 5'Ppact3-182:vegf**



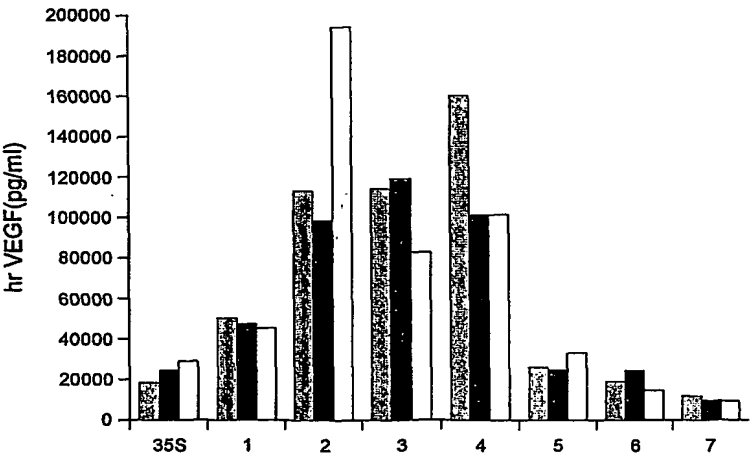
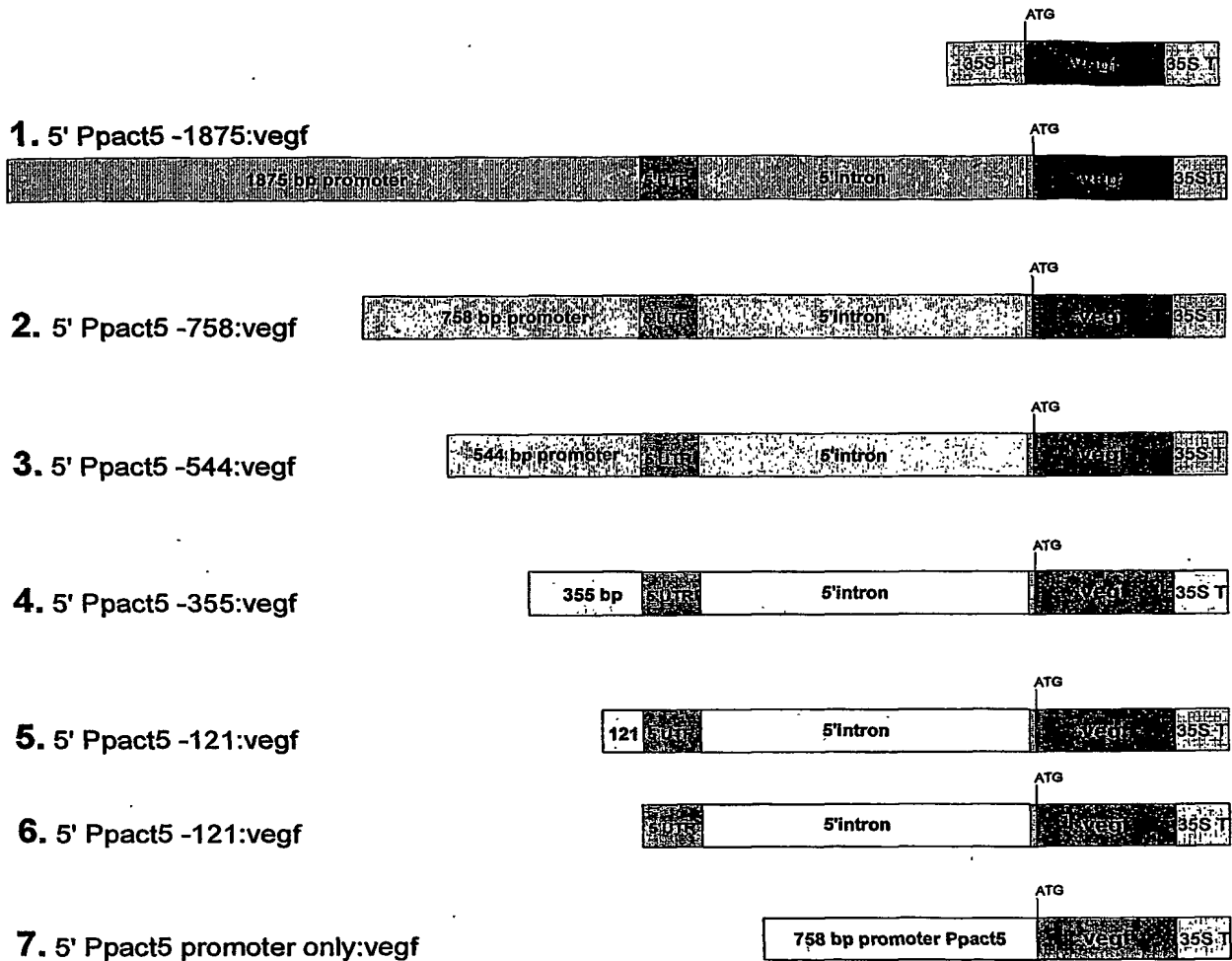
**7. 5'Ppact3-81:vegf**



**8. 5'UTR:vegf**



**Fig. 16: Ppact5 promoter:vegf deletion constructs.**





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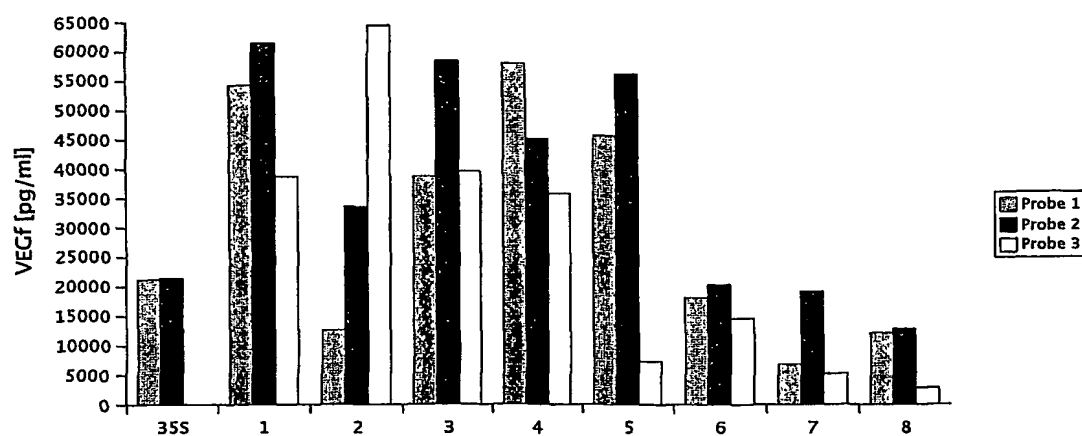
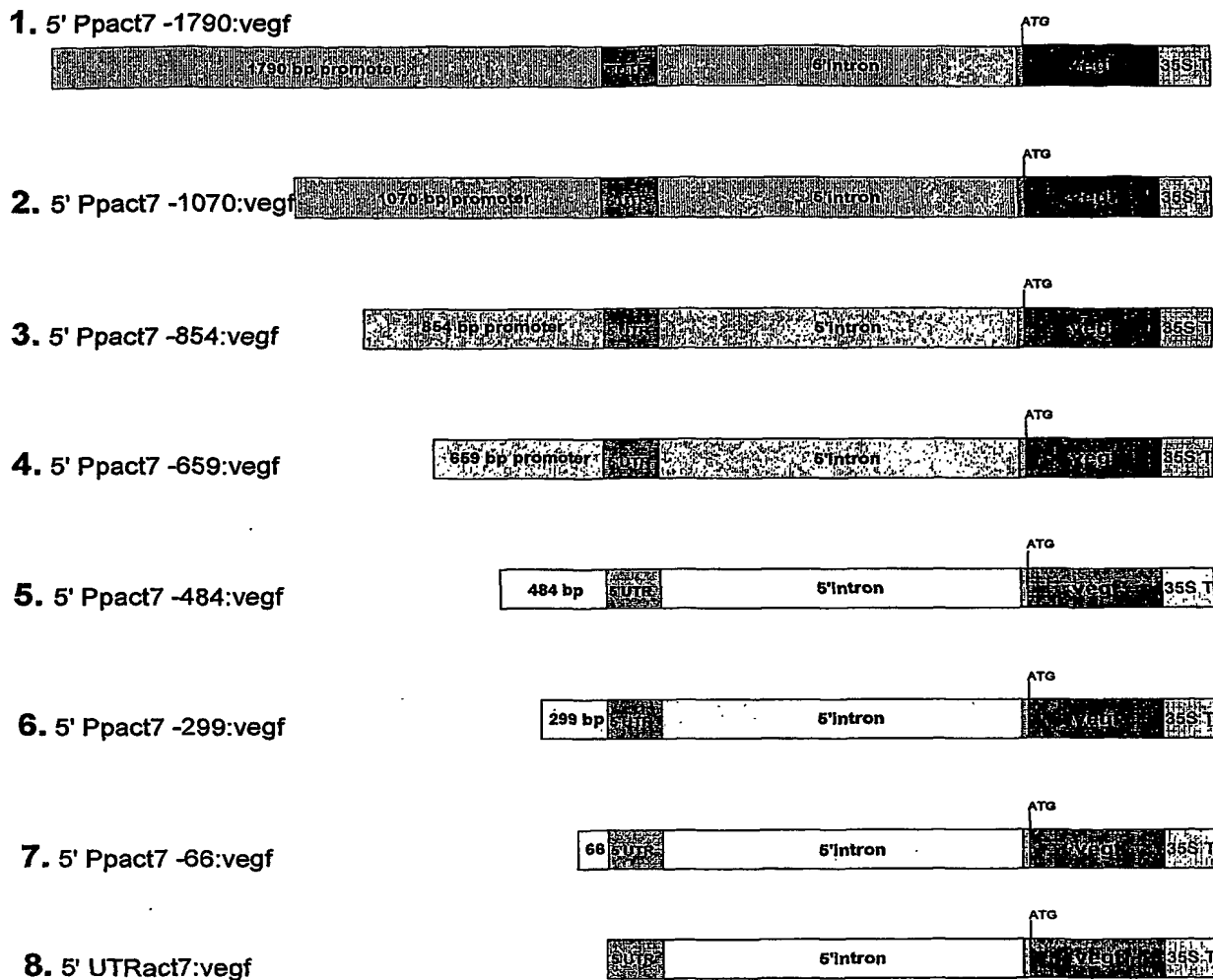
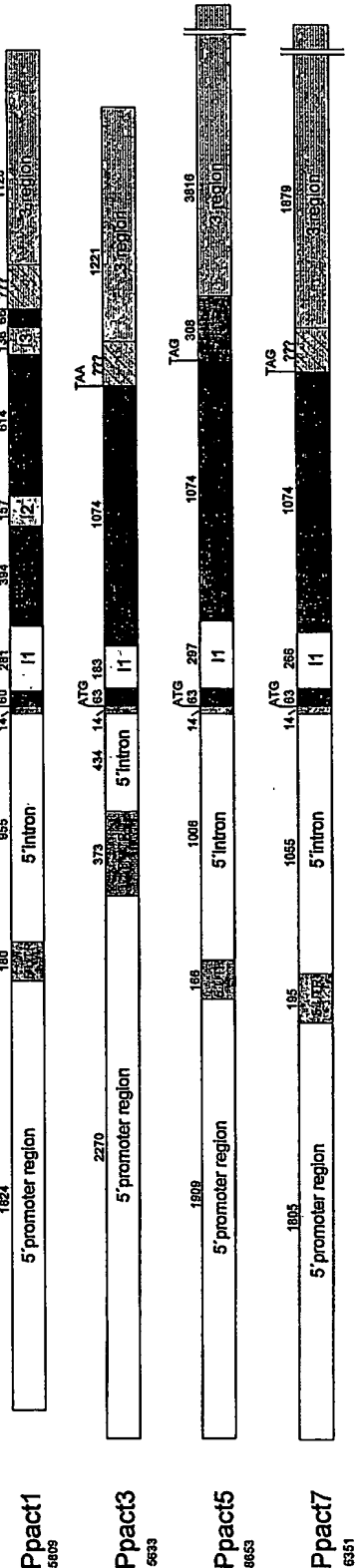
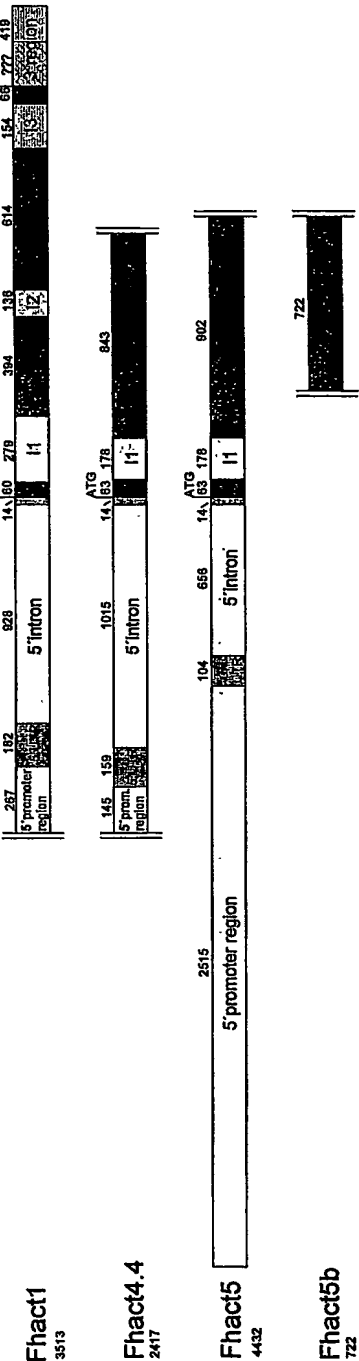
**Fig. 17: Ppact7 promoter:vegf deletion constructs.**

Fig.18

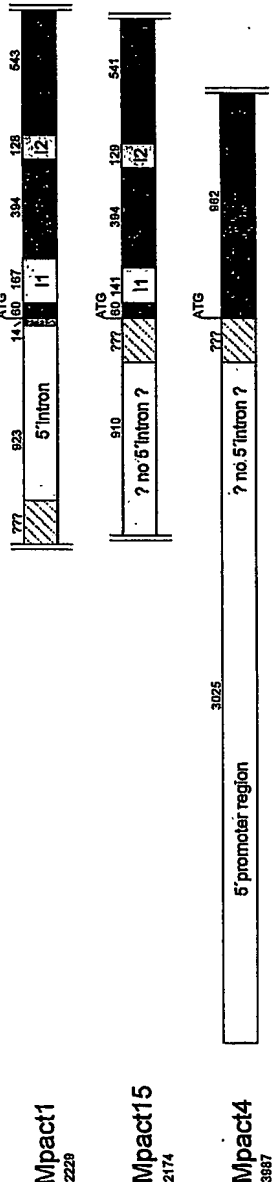
A) *Physcomitrella patens* actin genes

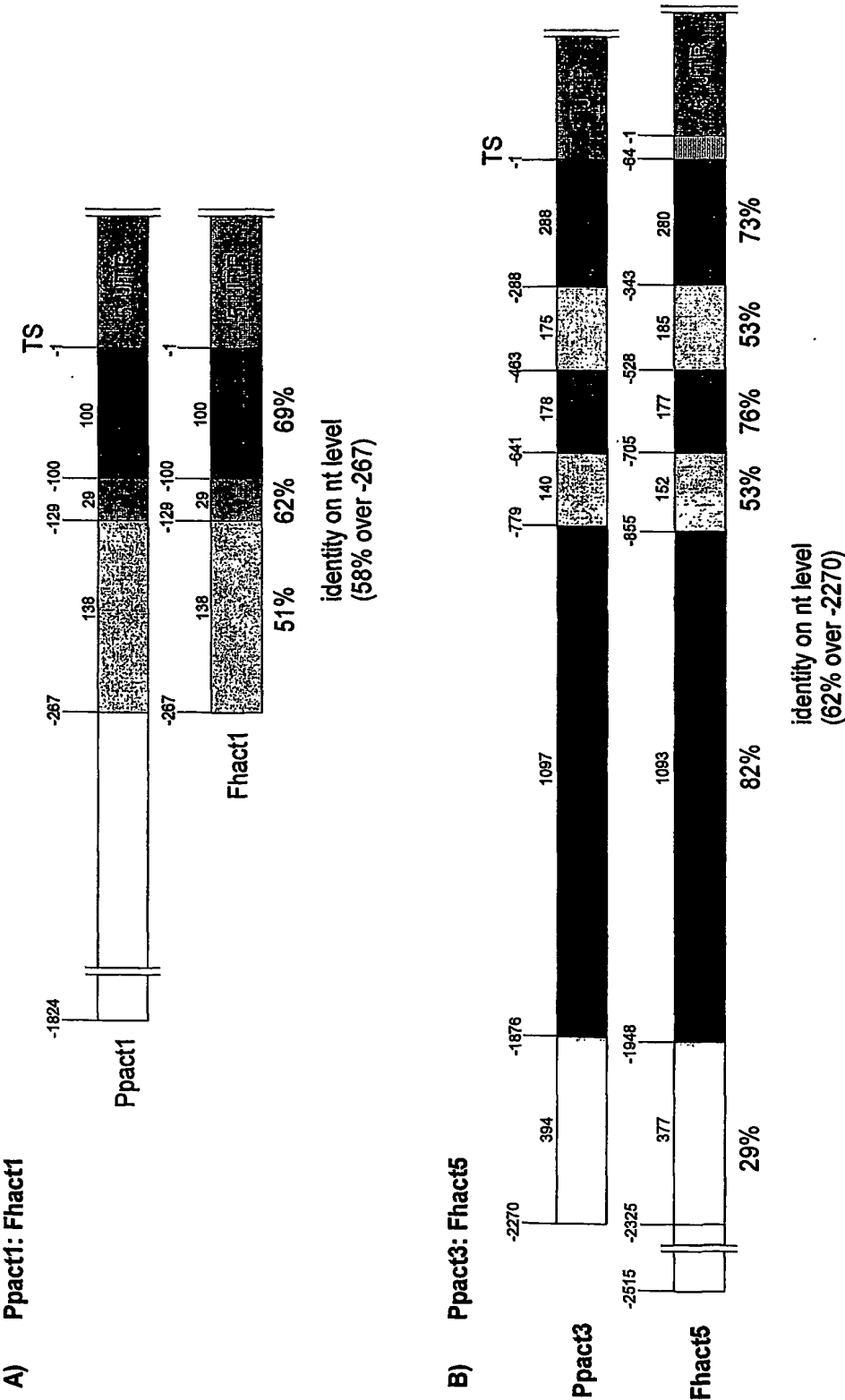


B) *Funaria hygrometrica* actin genes



C) *Marchantia polymorpha* actin genes





**Fig.: 19** Comparison of promoter sequences of homologous actin genes from *Physcomitrella patens* and *Funaria hygrometrica*

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